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**GRADUATION PROJECT BY NAME**

**"SOME POISONOUS PLANTS OF IRAQ"**

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## Introduction

Toxicity of herbal is common problem we are always expose to it every day, every time at our life style, and severity of toxicity is very critical problem at now because many of people can't differentiate between benefit plant from toxic plant or how can deal with their at safe route. At moment the toxicity isn't from harmful plant only, but also from safe plant also, can causes toxicity too, due either due take it or expose to it by over dose or some times immunological response to it it , like allergy to som of trigger agent present in some plant like asthma or allergic rhinitis, that occur in human being. Here, I will talk about some plant that present ao sever attack to our life and the aime of roject are :

- ✓ Determine benefit and medical uses of each plant
- ✓ How can we determine toxic plants?
- ✓ Known toxic dose of every plant
- ✓ Sign and symptoms of toxicity of every plant.
- ✓ Management of every toxicity and, how can we prevention from it.

# ***Viola odorata***

## **Scientific classificatio**

Family: *Violaceae*

Genus: ***Viola***

Species: *Viola odorata*



## **Characteristics**

- ✓ The flowers are aromatic
- ✓ The flowers are normally either dark violet or white,
- ✓ The leaves and flowers are all in a basal rosette,
- ✓ The leaf-stalks have hairs which point downwards, and
- ✓ The plant spreads with stolons (above-ground shoots).

**Uses:** Several cultivars have been selected for garden use

## **Medicinal uses:**

In herbal medicine *Viola odorata* has been used for

1. Respiratory ailments
2. Insomnia
3. And skin disorders.

## **Toxicity:**

*Viola odorata* is not a poison plant and toxicity in improper use or taken in higher doses than recommended and this toxicity is due to high content of saponin in root.

# *Urtica dioica*

## Scientific classification

Family : *Urticaceae*

Genus : *Urtica*

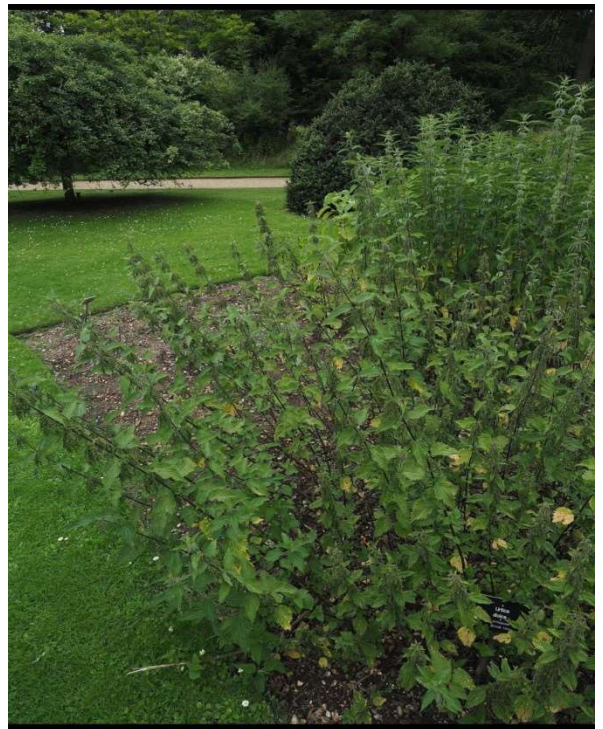
Species : *Urtica dioica*

## Characteristics:

*U. dioica* subspecies dioica. (European stinging nettle) from Europe, Asia and Northern Africa, has stinging hairs

*U. dioica* Subsp. Galeopsifolia. Found in Europe doesn't have stinging hairs

*U. dioica* subspecies. Afghancia. From southwestern and Central Asia sometime has stinging hairs or sometimes hairless



## Components:

The plant contains long, thin hollow hair that covers the majority of stem and underside leaves. Nettle sting has acid (formic acid) and also contains histamine and serotonin and choline and other chemicals and also contain vit A and C, iron, potassium, magnesium, calcium

## Uses:

In food: *U. dioica* has flavor similar to spinach mixed with cucumber when cooked and rich vit c and A, iron, potassium, magnesium and calcium

In drink: nettle leaves are steeped in concentrated sugar solutions to extract the flavor.

## Traditional medicine

*U. dioica* herb has been used in traditional medicine internally (as tea or fresh leaves) to treat disorders of kidneys and urinary tract, gastrointestinal tract, locomotor systems, skin, cardiovascular system, hemorrhage, influenza, rheumatism and gout

## Toxicity

*U. dioica* produce its inflammatory effect on skin (stinging, burning sensation, often called "contact urticaria") both by impaling the skin via spicules causing mechanical irritation and by biochemical irritant such as histamine and serotonin and Cholin among other chemical.

**Treatment of toxicity: anti itching drugs usually in forms of cream containing antihistamines or hydrocortisone may provide relief from nettle dermatitis**

# ***Cascabela thevetia***

## Classification

Family: *Apocynaceae*

Genus: *Cascabea*

Species: *Cascabela thevetia*

## Characteristics:

*Cascabela thevetia* is evergreen tropical shrub or small tree. Its leaves are willow like linear lanceolat coating with waxy material to reduce water loss (typical of oleander)



## Components

Studies undertaken on thevetia which show number of chemical compound like strol and iridiod glucoside and triterpens and its contain cardiac glycoside and amany toxin known cardenolides and other include perovuside .

## Uses:

Its mainly usede for treatment variety of maladies,because rang of therapeutic level is very narrow because it contain thevetin and Digitalis compounds that cause effect on muscle and heart beat irregularities and cause blood pressure elevation, and also cous pupil constriction and I crea salivation and cause intestinal peristalsis

## Toxicity

All part of Cascabel thevetia are toxic to most vertebrate as they contain cardiac glycoside, many cause of intentional and acceduntal posining are known. The main toxin are cardenolides the called thevetin A and thevetin B, others include perovuside, nefriifolin and rovuside, the cardenolides are not destroyed by drying or heating and they very similar to dioxin from Digitalis purourea they include gastric and Cardotoxic effects

**Treatment of toxicity:** antidote for treatment include atropine and digoxin immune fab and treatment may a include administration of activated charcoal and ovin Polyclonal anti dugitixun fab fragment antibody (DigiTab, therapeutic antibodies Inc) can be used to treat *T. peruvian*\_poisonings but for many countries the cost is prohibitive.

# *Dioscorea communis*

## Classification

Family: *Dioscoreaceae*

Genus: *Dioscorea*

Species: *Dioscorea communis*

## Characteristics

Its herbaceous plant growing to 2\_4 m tall with the stem that twines clockwise and the leaves are spirally arranged, heart shaped up 10 cm long





## Uses

All components of the black bryony plant including tubers are poisonous due to saoonin content so its not typically used internally however it has been used as poultceacefor bruises and inflamed joints. It has been suggested that black bryony be used topically due to the tendency for the plant to cause painful blister blister

## Toxicity

Studies have isolate calcium oxalate deposits and histamine in the berry juice and rhizome s which may contribute to skin irritation and contact dermatitis associate with black bryony, black bryony is high poisonous and not be ingested at all least when raw,

# *Solanum dulcamara*

## Classification

Family: *Solanacea*

Genus: *Solanum*

Species: *Solanum dulcamara*



## Characteristics

Bittersweet is semiwoody herbaceous perennial vine which scrambles over plants capable of reaching height of 4m where suitable support is available but more often 1\_2m high, the leaves is roughly arrowhead shaped and often at the base. The flower are loose cluster of 3\_20, 1\_1.5 cm a cross star shaped, the fruit is ovoid red berry about 1cm long

## Components

Contain alkaloid, solinin and solasodin and beta ssolamarin



## Uses

The stem are approved by the German commission E for external use as supportive therapy in chronic eczema. The alkaloid, solanin and solasodin and solamarin inhibited growth of E. coli and S. aureus. Solanin and solasodin extracted from Solanum dulcamara showed antidermatophytic activity against chrysosporium indium, trichophyton mentagrophytes and T. SIMIL thus it may cure ringworm

## Toxicity:

The fatal human poisonings are rare, several cases have been documented the person is believed to solanin

# *Rumex crispus*

## Classification

Family: *Polygonaceae*

Genus: *Rumex*

Species: *Rumex crispus*



## Characteristics

Plant produce an inflorescence or flower stalk that grows to about 1cm it has smooth leaves shooting off for large basal rosette seed produce in cluster on branched stem, and has shiny brown shape and encased in calyx of flower that produce them and root large yellow forking taproot

## Components

Oxalic acid, vitamin C, and A iron, potassium, anthraquinone.

## Uses

- ✓ The root used to treat anemia due has high amount of iron
- ✓ Used in combination with stinging nettle *Urtica dioica* to strongest laxative effect to some individuals
- ✓ The plant used with skin condition if taken internally or applied externally to things like itching, scrofula, sores
- ✓ Some studies show that certain anthraquinones can help stop or slow cancer growth, but this may not apply to the ones in yellow dock

## Toxicity:

Because has oxalic acid so shouldn't be consumed in high amount because it can cause irritation to urinary tract and development of kidney stones. It should be used with care during lactation as it may cause laxative effect to the infant

# ***Ranunculus sceleratus***

## **Classification**

Family: *Ranunculaceae*

Genus: *Ranunculus*

Species: *Ranunculus sceleratus*

## **Characteristics**

*Ranunculus sceleratus* known by common name celery leaved buttercup and cursed buttercup and it has circumpolar distribution in Northern hemisphere, native to temperate and boreal America and Eurasia where it grows in wet and moist habitats including ponds and streambank

## **Uses and toxicity**

While buttercup are toxic due to presence of substance protoanemonin, this applies in particular for cursed buttercup, it is the most toxic buttercup and the contain 2.5 % of protoanemonin, when the leaves are wrinkled, damaged or crushed, they bring out unsightly sores and blisters on human skin



# *Ranunculus asiaticus*

## Classification

Family: *Ranunculaceae*

Genus: *Ranunculus*

Species: *Ranunculus asiaticus*

## Characteristics

Its herbaceous perennial plant growing to 45cm tall with simple branched stem. The basal leaves are three lobed with leaves higher in stems more divided like they are downy or hairy, flower variably red to pink, yellow

## Uses

Double flowered forms which likely hybrid are popular ornamental plant in garden and widely used in florist,

## Toxicity

It's rarely and occur only when eaten freshly but due has acrilic tast mked it unneaten so decrease toxicity



# ***Ricinus communis***

## **Classification**

Family: *Euophorbiaceae*

Genus: *Ricinus*

Species: *Ricinus Communis*

## **Characteristics**

It greatly vary in growth habit and appearance, it's fast growing, sucker ring shrub that can reach the size of small tree, around 12cm but not cold hardly, the glosselly leaves are 15\_45 cm long stalked

## **Components**

Caster oil, terpenoids, tocopherol

## **Medicinal uses**

Caster oil has many uses in Medicinal and another application

- ✓ Alcolic extract of leaf used to protect liver from damage from certain poison
- ✓ Ricinus were used in antimicrobial testing against eight pathologic bacteria in rats and showed antimicrobial properties
- ✓ A water extract of root bark showed analgesic activity in rats
- ✓ Aantihistamin and atiinflamyory properties were found in ethanoic extract of rincinis communis root bark

## **Allergic potential**

Ricinus is extremely allergic and has OPALS allergy rating, they also plant very strong trigeer for asthsm ana alergis to Ricinus are commonplace and sever. The sap of plant cause skin rash

## **Toxicity**

Symptoms of over dosing (taken 4\_8 seeds) including :

Nausea, Diarhe, tachycardia, hypotension, seezures

Symptoms of ingested ricin including :

*Burning sensation in mouth and throat, abdominal pain, purging and bloody Diarrhea with sever dehydration, a drop in blood pressure and decrease in urin.  
Unless treated death can be expected to occur within 3\_5 days*





# ***Melia azedarach***

## **Classification**

Family : *Meliaceae*

Genus : *Melia*

Species: *Melia azedarach*

## **Characteristics**

Adults tree has rounded crown, commonly measured 7\_12 m, leaves are up to 50 cm in long alternate long petioled, two or three compound, leaflet are dark green above and lighter green bellow, flower are small and fragrant

## **Components**

Tetranortriterpenoids,, azaadirachtin

## **Uses**

In Medicinal and veterenial uses of M. azedarach inves tigation, and has efficacy against boophilus Micoplus,, the malaria vector anophelate steophensi, it has fungicidal and

Retindicidal potential and it has M. azedarach has eeffect on NAPDH cytochrom c reductas and acetylcholineesterase in insect will investigated, has antiviral antifungal and antibacterial of plant extract

## **Toxicity**

fruite are poisonous to human if taken, the toxin and underdntified resins, the first symptoms of poisonings appear a few hours after ingestion, include loss apetit and vomiting and



constipation and diarrhea and blood faces, stomach pain, pulmonary congestion, cardiac arrest toxin is neuro, rigidity, lack of coordination and general weakness

# ***Nerium oleander***

## **Classification**

Family: *Apocynaceae*

Species: *Nerium oleander*

## **Characteristics**

*Nerium oleander* grows to 2\_6m with erect stems that splay outward as they mature, first year stems have glaucous bloom, while stem have grayish

bark, the leaves are pair or whorls of three, thick and leathery, dark\_ dark green.



## **Components**

Has compounds like oleandrin and oleandrogenin, known as cardiac glycosides

## **Medical uses**

Drugs derived from *N. oleander* have been investigated as treatment for cancer, but have failed to demonstrate utility.

## **Toxicity**

Oleander has historically been considered a poisonous plant because some of its compounds may exhibit toxicity, especially to animals, when consumed in large amounts. Among the compounds are oleandrin and oleandrogenin, known as cardiac glycosides which are known to have a narrow therapeutic index and can be toxic when ingested.

## **Management of toxicity**

- ✓ Induced vomiting and gastric lavage are protective measures to reduce absorption of toxic compounds.
- ✓ Activated charcoal may also be administered to decrease absorption of any remaining toxins.
- ✓ And digoxin immune fab is the best way to cure oleander poisoning if inducing vomiting has no minimal success, although for life-threatening

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